

REMARKS

Claims 1-7 and 9-36 are pending in the application and stand rejected.

Rejection of Claims 18, 19 under 35 USC §102(b) over Smith

Claims 18 and 19 remain rejected as anticipated by the Smith patent (U.S. Patent No. 4,802,143). The Examiner contends that Smith teaches all of the elements of claim 18, including that of determining a subsurface characteristic of a formation from detection of seismic energy imparted into the formation. Specifically, the Examiner notes that Smith teaches determining mud pressure and considers this to be a “subsurface characteristic.”

Applicant disagrees and urges the Examiner to reconsider her position, particularly in view of the proposed clarifying amendments that Applicant is presenting here. Applicant has further amended independent claims 1, 12, 18, and 23 to specify that the subsurface characteristic is a “geologic” characteristic of the formation. This amendment is supported by the specification at least at p. 2, lines 10-15. As noted previously, Smith’s telemetry system does not reveal anything at all about the subsurface characteristics of the formation through which the wellbore is being drilled, as with the claimed invention. This is true even under the broadest reasonable interpretation of the language. Smith will only provide information about conditions within the wellbore itself, such as mud pressure, and not those of the formation. “Mud pressure,” refers to the pressure of drilling fluid (commonly referred to as drilling “mud”) that is being pumped through the drilling string or which is present in the wellbore itself. The “mud pressure” is not a subsurface characteristic of the “formation.” Applicant’s proposed amendment herein further distinguishes a system such as that shown in Smith by clarifying that the seismic signals employed by the claimed invention are those seismic signals useful for determining the geological conditions of the surrounding formation.

Rejection of Claims 1-8, 12, 13, 15-17, 23, 24, 26 and 33-36 under 35 USC §103(a) over Smith and Cretin

Claims 1-8, 12, 13, 15-17, 23, 24, 26 and 33-36 each continue to stand rejected for obviousness over a combination of the Smith and Cretin references.

Applicant traverses the rejection. These claims should be allowable at least as depending from allowable independent claims. Applicant also reasserts its earlier ground for traversing this rejection: neither of the cited references, alone or in combination, teaches transmitting seismic energy from the anchor and upon receiving that energy, determining a subsurface geologic characteristic of the formation.

Rejection of Claims 9-11, 14, 17, 20, and 25 under 35 USC §103(a) over Smith, Cretin and Nelson

Claims 9-11, 14, 17, 20, and 25 stand rejected for obviousness over a combination of the Smith, Cretin and Nelson references.

Applicant traverses the rejection. Applicant incorporates herein the arguments made above with respect to independent claims 1, 12, and 23 and Smith and Cretin to render these claims unpatentable. Applicant submits that claims 9-11, 14, 17, 20, and 25 should be patentable at least as depending from allowable base claims.

The Commissioner is hereby authorized to charge any fees deemed necessary for this response to **Deposit Account No. 02-0429 (284-15718-US)** maintained by Madan, Mossman & Sriram. The Examiner is invited to discuss this matter with Applicant's attorneys should any questions arise.

Respectfully submitted,

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